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**APPLICATION NUMBER: 60/522,626**

**FILING DATE: *October 21, 2004***

**RELATED PCT APPLICATION NUMBER: *PCT/US05/09436***




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## APPLICATION DATA SHEET

Electronic Version v14

Stylesheet Version v14.0

<b>Title of Invention</b>	REDUCED-WEIGHT HARD DISK DRIVE REMOVABLE PROTECTIVE CONTAINER WITH COST-EFFECTIVE MANUFACTURING PROCESS		
Application Type :		provisional, utility	
Attorney Docket Number :		STE.A.P003+	
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## TRANSMITTAL

Electronic Version v1.1

Stylesheet Version v1.1.0

<b>Title of Invention</b>	<b>REDUCED-WEIGHT HARD DISK DRIVE REMOVABLE PROTECTIVE CONTAINER WITH COST-EFFECTIVE MANUFACTURING PROCESS</b>	
Application Number :		
Date :		
First Named Applicant:	Paul Douglas Cochrane	
Confirmation Number:		
Attorney Docket Number:	STEA.P003+	
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Submitted By:		Elec. Sign.
David Bogart Dort Registered Number: 50213		/davidbogartdort50213/ Attorney

Documents being submitted:	Files
us-fee-sheet	STEA.P003Z-usfees.xml us-fee-sheet.xsl us-fee-sheet.dtd
us-request	STEA.P003Z-usrequ.xml us-request.dtd us-request.xsl
application-body	STD3.xml application-body.dtd Image1.tif Image2.tif Image3.tif isoamsa.ent isoamsb.ent isoamsc.ent isoamsn.ent isoamso.ent isoamsr.ent isobox.ent isocyr1.ent isocyr2.ent isodia.ent isogr1.ent isogr2.ent isogr3.ent isogr4.ent isolat1.ent isolat2.ent isomfrk.ent isomopf.ent isomscr.ent isonum.ent isopub.ent isotech.ent mathml2.dtd mathml2-qname-1.mod mmlalias.ent mmlextra.ent soextblx.dtd us-application-body.xsl wipo.ent
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claims-pdf	STD3-clms.pdf
description-pdf	STD3-desc.pdf
drawings-pdf	STD3-draw.pdf
<b>Comments</b>	

# REDUCED-WEIGHT HARD DISK DRIVE REMOVABLE PROTECTIVE CONTAINER WITH COST-EFFECTIVE MANUFACTURING PROCESS

## DESCRIPTION

[Para 1] FIG 1. shows the faceplate design with partial sidewalls from a rear perspective in the removable lightweight frontpiece may have multiple secure or unsecure locking solutions (see FIG. 2). The vibration and shock controlling “tabs” are shown at the top of the frontplate, but could be manufactured in other configurations in a plastic mold injection system or other cost-effective manufacturing process. The vibration and shock control in a lightweight polymer is discussed in US Patent Applications 10/711,104 invented by Paul Douglas Cochrane and filed in the USPTO on August 24, 2004, and 10/924,339, filed August 23, 2004 as well as US Provisional Application 60/554,364, entitled HARD DRIVE HAVEN, filed March 23, 2004, which are all incorporated by reference herein.

[Para 2] FIG. 2 shows a front view of the removable hard drive solution with a quarter turn lock in the rear. The skilled artisan will appreciate that while a secure or non-secure quarter turn may be a preferred embodiment, other configurations are possible. The honeycomb or alternatively, latticed front provides protection while the polymer is strong enough structurally in such a configuration. The thermal benefits of this structure are also part of the “total solution” because of the improved ventilation which is combined with the vibration and shock control of the system. FIG. 3 shows an embodiment designed for commercial use and with improved aesthetics.



### **What is claimed is:**

**[Claim 1]** A hard disk drive container system made of a strong lightweight polymer in which a frontplate portion of a front portion of said container is configured in a honeycomb formation for weight reduction and which includes a set of vibration control tabs located at least at one edge of said front portion, wherein said control tabs have elasticity in at least one direction.

**[Claim 2]** The container system as recited in claim 1, wherein said disk drive is removable and further including a locking mechanism.

**[Claim 3]** The container system as recited in claim 2, wherein said locking mechanism is a quarter-turn.

**[Claim 4]** The container system as recited in claim 3, wherein said locking mechanism can be secured.

**[Claim 5]** The container system as recited in claim 1, where said front portion is made from a single plastic injection mold.

**[Claim 6]** The container system as recited in claim 5, wherein said front portion snaps into a rear portion.

**[Claim 7]** The container system as recited in claim 1, wherein said polymer is polycarbonate.





## **ABSTRACT**

The invention teaches a reduced-weight vibration, wear and shock resistant removable container for a hard disk drive or other related data storage device. A suitable polymer is manufactured with appropriate vibration reduction "tabs" and a honeycomb or lattice faceplate made of a second strong polymer. A quarter turn lock may be used in conjunction for security purposes and made of another suitable material.



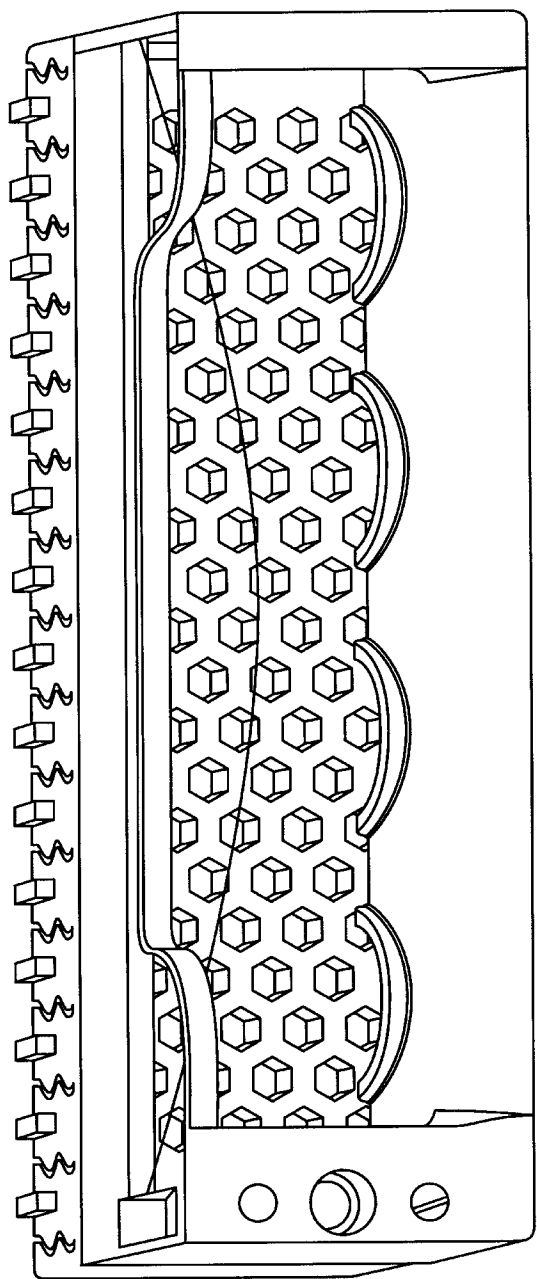


FIG. 1

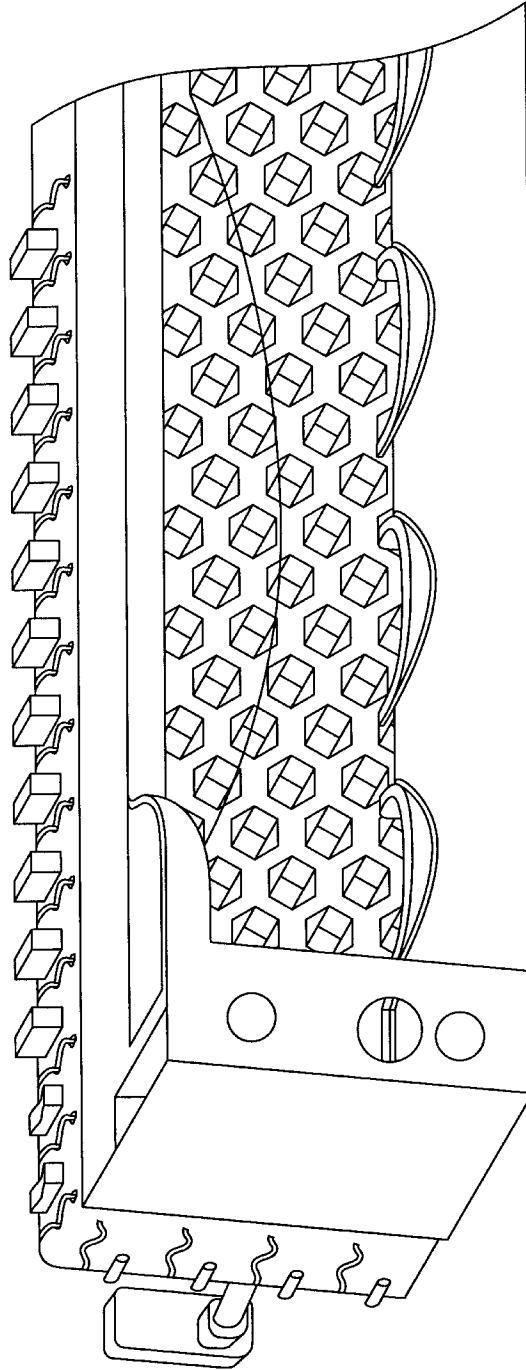


FIG. 2

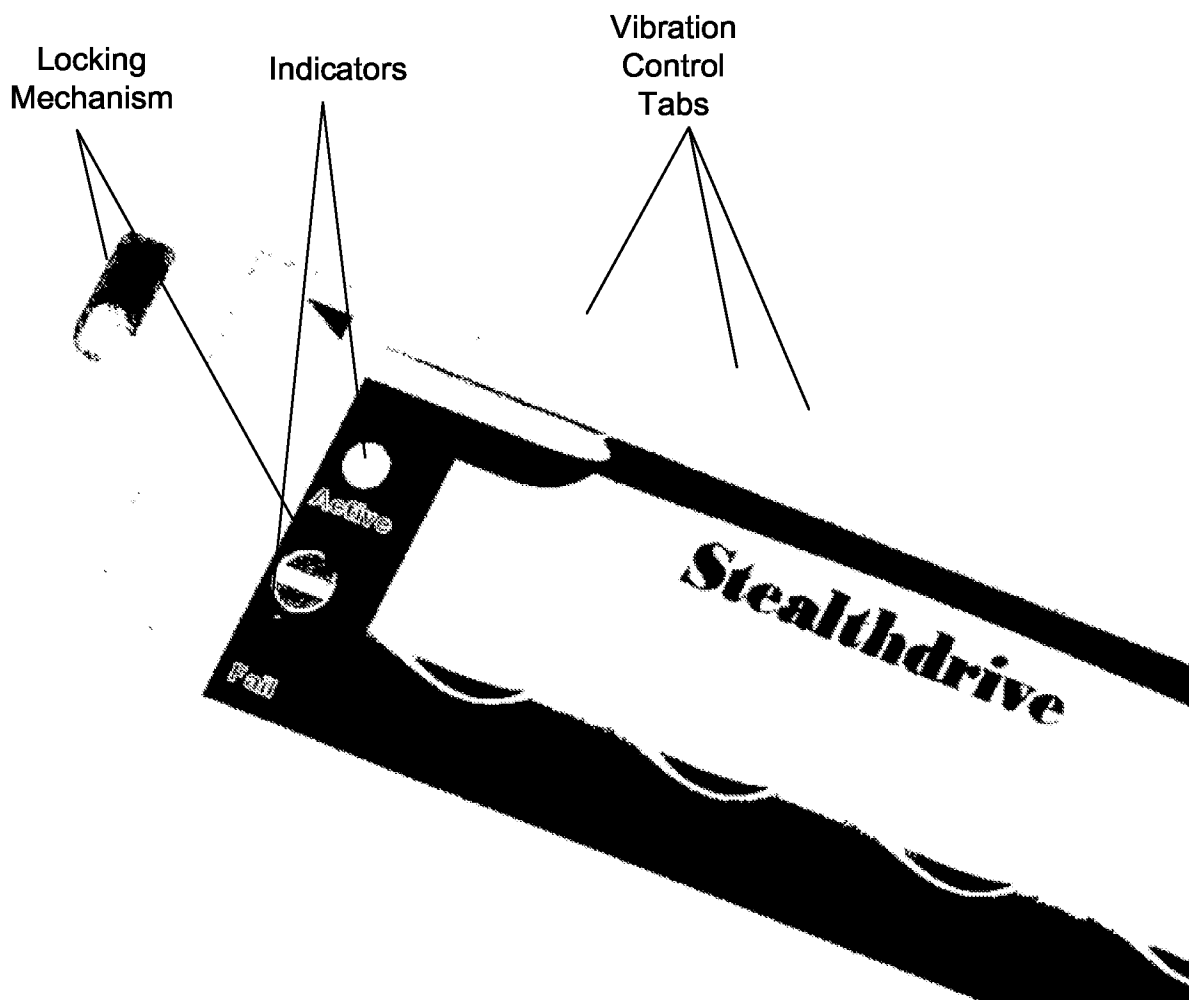


FIG. 3